10. Records and reports of marine monitoring surveys conducted to meet receiving water monitoring requirements shall include, at a minimum, the following information:

    a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, unusual or abnormal amounts of floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling or measurements, tidal stage and height, etc.).

    b. The date, exact place and description of sampling stations, including differences unique to each station (e.g., date, time, station location, depth, and sample type).

    c. A list of the individuals participating in field collection of samples or data and description of the sample collection and preservation procedures used in the various surveys.

    d. A description of the specific method used for laboratory analysis, the date(s) the analyses were performed and the individuals participating in these analyses.

    e. An in-depth discussion of the results of the survey. All tabulations and computations shall be explained.

11. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with this Order.

12. The Discharger shall attach a cover letter to the monitoring reports. The information contained in the cover letter shall clearly identify violations of the Order; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this Order. The Discharger shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule, except where specific monitoring periods and reporting dates are required elsewhere in the Order:

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins	Monitoring Period	SMR Due Date
Continuous	Order effective date	All	Submit with quarterly SMR
Hourly	Order effective date	Hourly	Submit with quarterly SMR
Daily	Order effective date	(Midnight through 11:59 PM) or any 24-hour period	Submit with quarterly SMR

Sampling Frequency	Monitoring Period Begins	Monitoring Period	SMR Due Date
		that reasonably represents a calendar day for purposes of sampling.	
Weekly	Sunday following Order effective date or on Order effective date if on a Sunday	Sunday through Saturday	Submit with quarterly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 to March 31 April 1 to June 30 July 1 to September 30 October 1 to December 31	May 15 August 15 November 15 February 15
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 to June 30 July 1 to December 31	August 15 February 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 15

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR § 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and

Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

6. **Multiple Sample Data.** When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND), the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, BMPs, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection X.B above.

2. Hauling Reports for Non-Biosolids Wastes

   a. In the event that wastes (not including biosolids) are transported to a different disposal site during the reporting period, the following shall be reported:

i. Types of wastes and quantity of each type;

ii. Name and either the address or the State registration number for each hauler of wastes (or the method of transport if other than by hauling); and

iii. Location of the final point(s) of disposal for each type of wastes.

b. If no wastes are transported off site during the reporting period, a statement to that effect shall be submitted.

3. Annual Summary Report

By April 15 of each year, the Discharger shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results (including the average and peak flow for the year). The annual report shall contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, the outfall system, or any changes that may affect the quality of the final effluent. The Discharger shall submit annual reports to the Regional Water Board in accordance with the requirements described in subsection X.B.7. above.

4. Receiving Water Monitoring Report

An annual summary of the receiving water monitoring data collected during each sampling year (January – December) shall be prepared and submitted to the Regional Water Board by August 1st of the following year. This annual summary shall include a brief discussion of the monitoring results.

A detailed Biennial Receiving Water Monitoring Assessment Report of the data collected during the two previous calendar sampling years (January-December) shall be prepared and submitted so that it is received by the Regional Water Board by August 1st of every other year. This report shall include an annual data summary, a description of the nearfield zone, and an in-depth analysis of the biological and chemical data following recommendations in *Design of 301(h) Monitoring Programs for Municipal Wastewater Discharges to Marine Water* (EPA, November 1982; 430/982-010; pages 74-91) and the Model Monitoring Program Guidance Document (Schiff, K.C., J.S. Brown and S.B. Weisberg, 2001. *Model Monitoring Program for Large Ocean Dischargers in Southern California.* SCCWRP Tech. Rep #357. Southern California Coastal Water Research Project, Westminster, CA. 101 pp.). Data shall be tabulated, summarized, graphed where appropriate, analyzed, interpreted, and generally presented in such a way as to facilitate ready understanding of its significance. Spatial and temporal trends shall be examined and compared. The relationship of physical and chemical parameters shall be evaluated. See also Section VIII of this MRP. All receiving water monitoring data shall be submitted in accordance with the California Environmental Data Exchange Network (CEDEN).

The first assessment report shall be due August 1, 2019 and cover the sampling periods from January 2017 through December 2018. Subsequent reports shall be due August 1, 2021, and August 1, 2023, to cover sampling periods from January 2019 through December 2020, and January 2021 through December 2022, respectively.

5. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

6. Outfall Inspection Report

   By April 15 following the year the outfall inspection is conducted, the Discharger shall prepare and submit a summary report of the outfall inspection findings to the Regional Water Board. This written report, augmented with videographic and/or photographic images, and shall provide a description of the observed external condition of the discharge pipes from shallow water to their respective termini.

7. Technical Report on Preventive and Contingency Plans

   The Regional Water Board requires the Discharger to file with the Regional Water Board, within 90 days after the effective date of this Order, a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

   a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.

   b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

   c. Describe facilities and procedures needed for effective preventive and contingency plans.

   d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent on interim and final dates when they will be constructed, implemented, or operational.

ATTACHMENT F – FACT SHEET

CONTENTS

TABLES

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190703003
Discharger	United States Navy (Navy)
Name of Facility	San Clemente Island Wastewater Treatment Plant
Facility Address	Navy Auxiliary Landing Field San Clemente Island, CA Los Angeles County
Facility Contact, Title and Phone	Thomas Niday, Utilities System Operator, (619) 524-9125
Authorized Person to Sign and Submit Reports	Jason Golumbfskie-Jones, Installation Environmental Program Director, (619) 545-3429
Mailing Address	Naval Base Coronado, PO Box 357088, San Diego, CA 92135
Billing Address	SAME
Type of Facility	Federally-owned Treatment Works (FOTW)
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	B
Pretreatment Program	No
Recycling Requirements	Producer and User
Facility Permitted Flow	0.025 million gallons per day (mgd) monthly average
Facility Design Flow	0.06 mgd – Secondary Treatment Plant 0.03 mgd – Tertiary Treatment Plant
Watershed	San Clemente Island Watershed
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

A. The United Sates Navy (hereinafter Discharger or Navy) is the owner and operator of the San Clemente Island Wastewater Treatment Plant (hereinafter Facility or SCI WWTP), a Federally-Owned Treatment Works (FOTW).

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R4-2013-0111 and National Pollutant

Discharge Elimination System (NPDES) Permit No. CA0110175 adopted on July 11, 2013, expired on August 30, 2018, and administratively extended until the adoption of this Order. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on March 02, 2018. Supplemental information was requested on March 07 and May 16, 2018 and received on May 02 and June 19, 2018. The application was deemed complete on July 11, 2018. A site visit was conducted on August 29, 2018, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

D. Regulations at Title 40 of the Code of Federal Regulations (40 CFR) § 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

A. Description of Wastewater Treatment and Controls

1. The Discharger owns and operates the SCI WWTP, located approximately 1,500 feet east of Wilson Cove and discharges a maximum monthly average of 0.025 mgd of treated wastewater to the Pacific Ocean, a water of the United States. This maximum permitted flow is a result of discussions between the Navy and the State Water Board regarding discharge to a designated Area of Special Biological Significance (ASBS).

2. The facility receives sewage from a separated sanitary sewer serving a population of approximately 500 people, except in cases when extra personnel are present due to training on the island. In those cases, wastewater from the portable toilets may be delivered directly to the headworks of the treatment system. Only residential wastes are discharged to the sanitary sewer and all industrial drains have been capped with concrete. Industrial wastes (used oil, used antifreeze, used batteries, etc.) are stored onsite and are manifested off the island via barge and properly disposed of in accordance with federal and state regulations. There is no industry on the island and most of the industrial waste generated is associated with facility and vehicle maintenance. Septage from the 22 septic tanks on the island may also be delivered directly to the headworks on an emergency basis to avoid or mitigate overflows. The septic tanks are routinely pumped by a contractor and septage transported offsite by barge to a City of San Diego treatment works pump station.

3. The Facility's treatment system consists of a package-type secondary-23 wastewater treatment plant, built in 1979, and a recently installed package-type tertiary wastewater treatment plant. The influent flows through a comminutor and then into a primary equalization tank. The two plants are hydraulically connected at this point and the flow may be directed to either plant once the tertiary plant is in operation. The secondary-23 treatment plant is currently the only treatment plant in operation at the Facility. It has a design capacity of 0.060 million gallons per day (mgd) and consists of comminution, equalization, activated sludge extended aeration, clarification, chlorination, and dechlorination. The tertiary treatment plant is not currently in operation but the Discharger anticipates having the treatment plant online within the next year. It has a design capacity of 0.030 mgd and consists of the Smith and Loveless Titan Membrane Bio Reactor Package, which includes fine screening, flow equalization, sludge storage, anoxic zones, an aeration zone including an immersion-type membrane module of flat

sheet polyvinylidene difluoride (PVDF), a filtration zone, chlorine contact, and dechlorination. The membrane is the Membray® brand manufactured by Toray and is listed as an approved technology by the State Water Resources Control Board, Division of Drinking Water, in their *Alternative Treatment Technology Report for Recycled Water* published in 2014. Treated wastewater, prior to dechlorination, is pumped to either a tertiary or a secondary-23 recycled water storage tank, depending on water quality. The sludge is either dried in drying beds or bagged for dewatering over plastic pallets. The dried solids are sent to the landfill on San Clemente Island for disposal and regulated under Order No. R4-2010-0045, adopted by the Regional Water Board on March 04, 2010. A process flow diagram of the facility consisting of both treatment plants is depicted in Attachment C.

4. The Navy intends to operate the tertiary treatment plant exclusively, except during startup and maintenance of the tertiary plant, and during emergencies. The secondary plant will only be operated in emergency situations or when the tertiary plant must be shut down for maintenance.

5. Consistent with the ASBS exclusion area, this Order authorizes the Navy to discharge a maximum monthly average of 0.025 mgd of treated wastewater to the Pacific Ocean.

B. Discharge Points and Receiving Waters

The Facility has two discharge points located 250 feet east of the Facility on the northeast end of the island approximately 1,000 feet south of Wilson Cove. Discharge Point 001 is a shoreline discharge and has been decommissioned. Discharge Point 002 is a submerged, 450-foot long, 3.6-inch diameter, outfall located 70 feet below the ocean's surface. The discharge point is within the ASBS exclusion area because it is within a 1,000-foot radius from the original end-of-pipe (State Water Board Resolution 77-11).

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations/Discharge Specifications contained in the existing Order for discharges from Discharge Point 002 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation				Monitoring Data (From January 2013 – March 2018)		
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Conventional/Non-Conventional								
Biochemical Oxygen Demand (BOD)	mg/L	30	45	--	--	44.1	--	44.1
Total Suspended Solids (TSS)	mg/L	30	45	--	--	18.3	--	18.3
Oil & Grease	mg/L	25	40	--	75	1.51	--	1.51
Settleable Solids	mL/L	1.0	1.5	--	3.0	<1	--	<1
Nitrate-N	mg/L	--	--	--	--	45.9	--	45.9
Nitrite-N	mg/L	--	--	--	--	0.592	--	0.592
pH	pH Unit	6.0 - 9.0				7.71	--	7.71
Temperature	°F	--	--	--	100	74.5	--	74.5
Turbidity	NTU	75	100	--	225	9.56	--	9.56

Parameter	Units	Effluent Limitation				Monitoring Data (From January 2013 – March 2018)		
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Marine Aquatic Life Protection								
Arsenic	µg/L	--	--	--	--	8.07	--	8.07
Cadmium	µg/L	--	--	--	--	<0.2	--	<0.2
Chromium (VI)	µg/L	--	--	--	--	0.248 (DNQ)	--	0.248 (DNQ)
Copper	µg/L	--	--	--	--	251	--	251
Lead	µg/L	--	--	--	--	0.55 (DNQ)	--	0.55 (DNQ)
Mercury	µg/L	--	--	--	--	0.107 (DNQ)	--	0.107 (DNQ)
Nickel	µg/L	--	--	--	--	8.0	--	8.0
Selenium	µg/L	--	--	--	--	1.05	--	1.05
Silver	µg/L	--	--	--	--	<0.2	--	<0.2
Zinc	µg/L	--	--	--	--	2270	--	2270
Cyanide	µg/L	--	--	--	--	27.1	--	27.1
Total Residual Chlorine	µg/L	274	--	100	8200	15.4	--	15.4
Ammonia-N	mg/L	--	--	--	--	6.4	--	6.4
Phenolic Compounds (non-chlorinated)	µg/L	--	--	--	--	<11	--	<11
Phenolic Compounds (chlorinated)	µg/L	--	--	--	--	<11	--	<11
Endosulfan	µg/L	--	--	--	--	0.03 (DNQ)	--	0.03 (DNQ)
Endrin	µg/L	--	--	--	--	<0.011	--	<0.011
Hexachlorocyclohexane (HCH)	µg/L	--	--	--	--	0.48	--	0.48
Chronic Toxicity	TUc	--	--	137	--	270	--	270
Radioactivity								
Gross Alpha	pCi/L	--	--	--	--	12.4	--	12.4
Gross Beta	pCi/L	--	--	--	--	10.6	--	10.6
Human Health Toxicants – Noncarcinogens								
Acrolein	µg/L	--	--	--	--	<2	--	<2
Antimony	µg/L	--	--	--	--	1.91	--	1.91
Bis (2-Chloroethoxy) methane	µg/L	--	--	--	--	<11	--	<11
Bis (2-Chloroisopropyl) ether	µg/L	--	--	--	--	<11	--	<11
Chlorobenzene	µg/L	--	--	--	--	<1	--	<1
Chromium III	µg/L	--	--	--	--	0.719 (DNQ)	--	0.719 (DNQ)
Di-n-Butyl Phthalate	µg/L	--	--	--	--	<11	--	<11
Dichlorobenzenes	µg/L	--	--	--	--	<11	--	<11
Diethyl phthalate	µg/L	--	--	--	--	<11	--	<11
Dimethyl phthalate	µg/L	--	--	--	--	<11	--	<11

Parameter	Units	Effluent Limitation				Monitoring Data (From January 2013 – March 2018)		
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
4,6-dinitro-2-methylphenol	µg/L	--	--	--	--	<11	--	<11
2,4-dinitrophenol	µg/L	--	--	--	--	<11	--	<11
Ethylbenzene	µg/L	--	--	--	--	<2	--	<2
Fluoranthene	µg/L	--	--	--	--	<11	--	<11
Hexachlorocyclopentadiene	µg/L	--	--	--	--	<11	--	<11
Nitrobenzene	µg/L	--	--	--	--	<11	--	<11
Thallium	µg/L	--	--	--	--	<0.2	--	<0.2
Toluene	µg/L	--	--	--	--	<1	--	<1
Tributyltin	µg/L	--	--	--	--	3.9	--	3.9
1,1,1-trichloroethane	µg/L	--	--	--	--	<1	--	<1
Human Health Toxicants - Carcinogens								
Acrylonitrile	µg/L	--	--	--	--	<2	--	<2
Aldrin	µg/L	--	--	--	--	<5.4	--	<5.4
Benzene	µg/L	--	--	--	--	<20	--	<20
Benzidine	µg/L	--	--	--	--	<42	--	<42
Beryllium	µg/L	--	--	--	--	<0.1	--	<0.1
Bis (2-Chloroethyl) ether	µg/L	--	--	--	--	<11	--	<11
Bis(2-ethylhexyl)-phthalate	µg/L	--	--	--	--	39	--	39
Carbon tetrachloride	µg/L	--	--	--	--	<1	--	<1
Chlordane	µg/L	--	--	--	--	0.034 (DNQ)	--	0.034 (DNQ)
Chlorodibromomethane	µg/L	--	--	--	--	22	--	22
Chloroform	µg/L	--	--	--	--	51	--	51
DDT	µg/L	0.024	--	--	--	<0.01	--	<0.01
1,4-Dichlorobenzene	µg/L	--	--	--	--	<11	--	<11
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	<11	--	<11
1,2-dichloroethane	µg/L	--	--	--	--	<1	--	<1
1,1-dichloroethylene	µg/L	--	--	--	--	<1	--	<1
Dichlorobromomethane	µg/L	--	--	--	--	39	--	39
Dichloromethane	µg/L	--	--	--	--	3.5 (DNQ)	--	3.5 (DNQ)
1,3-dichloropropene	µg/L	--	--	--	--	<1	--	<1
Dieldrin	µg/L	--	--	--	--	<0.011	--	<0.011
2,4-Dinitrotolulene	µg/L	--	--	--	--	<11	--	<11
1,2-Diphenylhydrazine	µg/L	--	--	--	--	<11	--	<11
Halomethanes	µg/L	--	--	--	--	2.8 (DNQ)	--	2.8 (DNQ)
Heptachlor	µg/L	--	--	--	--	0.018 (DNQ)	--	0.018 (DNQ)
Heptachlor epoxide	µg/L	--	--	--	--	0.011 (DNQ)	--	0.011 (DNQ)
Hexachlorobenzene	µg/L	--	--	--	--	<11	--	<11

Parameter	Units	Effluent Limitation				Monitoring Data (From January 2013 – March 2018)		
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Hexachlorobutadiene	µg/L	--	--	--	--	<11	--	<11
Hexachloroethane	µg/L	--	--	--	--	<11	--	<11
Isophorone	µg/L	--	--	--	--	<11	--	<11
N-Nitrosodimethylamine	µg/L	--	--	--	--	<11	--	<11
N-Nitrosodi-N-propylamine	µg/L	--	--	--	--	<11	--	<11
N-Nitrosodiphenylamine	µg/L	--	--	--	--	<11	--	<11
Polycyclic Aromatic Hydrocarbons (PAHs)	µg/L	--	--	--	--	<11	--	<11
Polychlorinated Biphenyls (PCBs)	µg/L	--	--	--	--	<0.54	--	<0.54
TCDD equivalents	µg/L	$5.3x10^{-7}$	--	--	--	$8.96x10^{-3}$	--	$8.96x10^{-3}$
1,1,2,2-tetrachloroethane	µg/L	--	--	--	--	<1	--	<1
Tetrachloroethylene	µg/L	--	--	--	--	<1	--	<1
Toxaphene	µg/L	--	--	--	--	<0.54	--	<0.54
Trichloroethylene	µg/L	--	--	--	--	<1	--	<1
1,1,2-trichloroethane	µg/L	--	--	--	--	<1	--	<1
2,4,6-Trichlorophenol	µg/L	--	--	--	--	<11	--	<11
Vinyl chloride	µg/L	--	--	--	--	<1	--	<1

D. Compliance Summary

Table F-3. List of Violations for SCI WWTP

Violation ID	Occurrence Date	Violation Description
983795	09/09/13	Exceedance of pH Instantaneous Minimum
965394	10/08/13	Exceedance of pH Instantaneous Minimum
965395	10/09/13	Exceedance of pH Instantaneous Minimum
1007889	09/08/14	Exceedance of pH Instantaneous Minimum
990921	10/20/14	Exceedance of pH Instantaneous Minimum
990923	11/23/14	Exceedance of pH Instantaneous Minimum
990922	11/25/14	Exceedance of pH Instantaneous Minimum
990924	11/28/14	Exceedance of pH Instantaneous Minimum
990919	03/16/15	Exceedance of pH Instantaneous Minimum
994486	05/11/15	Exceedance of pH Instantaneous Minimum
1023344	04/04/16	Exceedance of pH Instantaneous Minimum
1023404	07/31/16	Exceedance of TCDD equivalents Monthly Average
1023405	07/31/16	Exceedance of TCDD equivalents Monthly Average
1020533	10/02/16	Exceedance of total residual chlorine instantaneous maximum
1020534	12/05/16	Exceedance of Minimum % Removal BOD

The pH exceedances were the result of improper sodium bisulfite dosing during dechlorination. Staff received additional training and began closer monitoring of the pH. The last low pH exceedance occurred in April 2016.

The total residual chlorine concentration was reported as 15.4 mg/L and the instantaneous maximum final effluent limitation is 8.2 mg/L. The sodium bisulfite dose was increased to address the spike in total residual chlorine. There were no exceedances of the instantaneous maximum water quality objective in the annual receiving water monitoring conducted in August 2016.

In January of 2015, the Discharger failed to collect effluent samples for fecal coliform and *Enterococcus*. Staff was notified of the uncollected samples and additional training was provided to staff.

In April 2015, the Chief Plant Operator (CPO) had improper grade level certification for the wastewater treatment plant. The Discharger has since provided the Regional Water Board with documentation that the CPO now has the proper grade level certification.

The following table lists the violations of the 137 TUc chronic toxicity trigger. The Discharger conducted the accelerated monitoring as required in Order No. R4-2013-0111.

Table F-4. Chronic Toxicity Violation Summary SCI WWTP

Test Date	Test Species	Endpoint	NOEC	TUc	EC/IC$_{25}$	%Effect at IWC
10/26/15	*Macrocystis pyrifera*	Growth	0.37	270	>2.9	0.86%
07/05/16	*Macrocystis pyrifera*	Growth	0.37	270	>2.9	5.09%
08/29/16	*Macrocystis pyrifera*	Growth	0.37	270	>2.9	2.54%

E. Planned Changes

The Discharger anticipates commencing operation of the tertiary treatment plant toward the end of 2019. Once online, the tertiary treatment plant will be operated exclusively, except during periods of high flows to the treatment system, and during start-up and maintenance of the tertiary treatment plant.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that

has been occasionally amended and designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and other Receiving Waters addressed through the plan. Requirements in this Order implement the Basin Plan including its subsequent amendments.

Beneficial uses applicable to the Pacific Ocean around San Clemente Island are as follows:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Pacific Ocean San Clemente Island Los Angeles Coastal Feature	Existing: Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Navigation (NAV), Commercial and Sport Fishing (COMM), Marine Habitat (MAR), Wildlife Habitat (WILD) (Marine habitats of the Channel Islands and Mugu Lagoon serve as pinniped haul-out areas for one or more species, i.e. sea lions), Preservation of Biological Habitats (BIOL; Area of Special Biological Significance), Rare, Threatened, or Endangered Species (RARE), Shellfish Harvesting (SHELL). Potential: Spawning, Reproduction, and/or Early Development (SPWN)

2. **California Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal and inland surface waters. The Thermal Plan defines the discharge from the Facility as an existing discharge of elevated temperature waste to coastal waters because the discharge is currently taking place and the temperature of the discharge is higher than the natural temperature of the receiving coastal waters. For coastal waters, the Thermal Plan requires elevated temperature wastes to comply with limitations necessary to assure protection of the beneficial uses and areas of special biological significance. This Order includes temperature objectives for coastal waters; therefore, the requirements of this Order implement the Thermal Plan.

6. **California Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, ~~and~~ 2012, and 2015. The State Water Board adopted the latest amendment on May 06, 2015, and became effective on January 28, 2016. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
002	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

To protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the 2015 Ocean Plan.

7. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR § 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

8. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA and California Ocean Plan. Individual pollutant restrictions consist of technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs). The TBELs consist of restrictions on BOD, TSS, pH, and percent removal of BOD and TSS, which implement the minimum applicable federal technology-based requirements. In addition, effluent limitations more stringent than federal technology-based requirements consisting of restrictions on oil and grease, settleable solids, and turbidity are necessary to implement State treatment standards in Table 2 of the 2015 Ocean Plan. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

   WQBELs for chronic toxicity, copper, zinc, total residual chlorine, and TCDD equivalents, have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and WQOs contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR § 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

9. **Antidegradation Policy.** Federal regulation 40 CFR § 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and

incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR § 131.12 and State Water Board Resolution 68-16 and is described in further detail in Section V.D.2. of this Fact Sheet.

10. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and 40 CFR § 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The applicability of these requirements to this Order is discussed in detail in section V.D.1. of this Fact Sheet.

    The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the Order will be reopened to incorporate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conform with antidegradation policies and antibacksliding provisions.

11. **Endangered Species Act (ESA) Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California ESA (Fish and Game Code, §§ 2050 to 2097) or the Federal ESA (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable ESA.

12. **Monitoring and Reporting.** 40 CFR § 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

13. **Water Recycling.** In accordance with statewide policies concerning water reclamation[1], this Regional Water Board strongly encourages, wherever practicable, water recycling, water conservation, and use of storm water and dry-weather urban runoff. The Discharger shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater (such as groundwater injection), and/or use of storm water and dry-weather urban runoff.

14. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR § 122.41, and additional conditions applicable to POTWs in accordance with 40 CFR § 122.42, are provided in Attachment D. The Regional Water Board and USEPA have also included in this Order Special Provisions applicable to the Discharger. The rationale for the Special Provisions contained in this Order is provided in the attached Fact Sheet.

[1] See, e.g., CWC sections 13000 and 13550-13557, State Water Board Resolution No. 77-1 (Policy with Respect to Water Reclamation in California), and State Water Board Resolution No. 2009-0011 (Recycled Water Policy).

D. Impaired Water Bodies on the CWA section 303(d) List

The State Water Board proposed the California ~~2012~~ 2014-16 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing CWA section 303(d) List of Impaired Waters and section 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested persons. ~~The Regional Water Boards' Integrated Reports were used to revise their 2010 303(d) List. On April 08, 2015, the State Water Board adopted the California 2012 Integrated Report. On July 30, 2015, the USEPA approved California's 2012 Integrated Report Section 303(d) List of Impaired Waters requiring Total Maximum Daily Loads (TMDLs) for the Los Angeles Region.~~ On April 06, 2018, the 2014-2016 Integrated Report Section 303(d) List of Impaired Waters was approved by USEPA. The CWA section 303(d) list can be viewed at the following link: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtmlhttp://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml.

E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations.** 40 CFR § 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations or to prevent backsliding.

2. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR § 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, in November 1991, the State Water Board issued a statewide general permit, NPDES No. CAS000001: *General Permit for Storm Water Discharges Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ, and superseded by Order No. 2014-0057-DWQ on April 01, 2014, to regulate storm water discharges associated with industrial activity.

   General NPDES permit No. CAS000001 is applicable to storm water discharges from the Facility. On July 15, 2016, the Discharger filed a Notice of Intent to comply with the requirements of the *General Permit for Storm Water Discharges Associated with Industrial Activities* Order No. 2014-0057-DWQ. The Discharger developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP) to comply with Order No. 2014-0057-DWQ.

3. **Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR § 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency.

4. **Watershed Management.** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about watersheds in the region can be obtained at the Regional Water Board's website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/index.shtml. The WMA emphasizes cooperative relationships between regulatory

agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available.

The Regional Water Board has prepared and periodically updates its Watershed Management Initiative Chapter and the latest version was updated December 2007. This document contains a summary of the region's approach to watershed management. It addresses each watershed and the associated water quality problems and issues. It describes the background and history of each watershed, current and future activities, and addresses TMDL development. The information can be accessed on our website: http://www.waterboards.ca.gov/losangeles.

This Order and the accompanying Monitoring and Reporting Program (Attachment E) fosters implementation of this approach.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR § 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR § 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR § 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or an indicator parameter may be established.

A. Discharge Prohibitions

Discharge prohibitions in this Order are based on the requirements in section III.I of the 2015 California Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Technology-based effluent limitations require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level - referred to as "secondary treatment" - that all POTWs were required to meet by July 1, 1977. More specifically, section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards for POTWs as defined in section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR § 133. These technology- based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment. The Discharger operates an FOTW that treats wastewater of similar quality to POTWs and includes similar treatment processes as POTWs. Since the operation of the Facility is comparable to a POTW, the Regional Water Board used BPJ to apply the secondary treatment standards to this facility. The secondary treatment standards were included in the previous order as technology-based effluent limitations and were therefore carried over in this Order.

2. Applicable Technology-Based Effluent Limitations

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR § 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and more stringent effluent limitations necessary to meet minimum federal technology-based requirements based on Secondary Standards at 40 CFR § 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR § 125.3. Secondary treatment is defined in terms of three parameters – $BOD_5$20°C, TSS, and pH. The following summarizes the technology-based requirements for secondary treatment, which are applicable to the Facility:

Table F-7. Summary of TBELs in 40 CFR § 133.102

Parameter	Units	Effluent Limitations	
		Average Monthly	Average Weekly
$BOD_5$20°C	mg/L	30	45
TSS	mg/L	30	45
Removal Efficiency for TSS	%	85	--
Removal Efficiency for BOD	%	85	--
pH	6.0 to 9.0 pH units		

Also, Table 2 of the 2015 Ocean Plan establishes the following technology-based effluent limitations, which are applicable to the Facility:

Table F-8. Summary of TBELs for POTWs established by the 2015 Ocean Plan

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
Oil & Grease	mg/L	25	40	75
TSS	mg/L	--	--	--
Settleable Solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
Removal Efficiency for TSS	%	75	--	--
pH	6.0 to 9.0 pH units			

All technology-based effluent limitations from Order No. R4-2013-0111 for $BOD_5$20°C, TSS, oil and grease, settleable solids, pH, and turbidity are retained in this Order. Limitations for $BOD_5$20°C, TSS, and pH are based on secondary treatment standards established by the USEPA at 40 CFR § 133. Limitations for oil and grease, settleable solids, and turbidity are based on requirements in the 2015 Ocean Plan. The mass-based maximum daily effluent limitations were developed to satisfy ASBS requirements. The dilution ratio was not considered in the development of the technology-based effluent limitations.

The following table summarizes the technology-based effluent limitations for the discharge from the Facility:

Table F-9. Summary of TBELs

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
$BOD_5$20°C	mg/L	30	45	--	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
	lbs/day[2]	6.3	9.4	19	--	--
	% removal	85	--	--	--	--
TSS	mg/L	30	45	--	--	--
	lbs/day[2]	6.3	9.4	19	--	--
	% removal	85	--	--	--	--
Oil & Grease	mg/L	25	40	--	--	75
	lbs/day[2]	5.2	8.3			15
Settleable Solids	mL/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	6.0 to 9.0 pH units					

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. USEPA has applied CWA section 403(c) and 40 CFR § 125, Subpart M, following 40 CFR § 122.

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or any applicable water quality standards contained in the Ocean Plan. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan establish the beneficial uses and Water Quality Objectives for ocean waters of the State. The beneficial uses of the receiving waters affected by the discharge have been described previously in this Fact Sheet. The Basin Plan contains Water Quality Objectives for bacteria for water bodies designated for water contact recreation and the Ocean Plan contains water quality objectives for bacterial,

[2] The mass emission rates are calculated using 0.025 mgd consistent with the water quality-based limits in the previous permit: lbs/day = 0.00834 x Ce (effluent concentration, µg/L) x Q (flow rate, mgd). During wet-weather storm events in which the flow exceeds 0.025 mgd, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

physical, chemical, and biological characteristics, and radioactivity. The Water Quality Objectives from the Ocean Plan and Basin Plan were incorporated into this Order as either final effluent limitations (based on reasonable potential) or receiving water limitations.

3. Expression of WQBELS

Pursuant to 40 CFR § 122.45(d)(2), for continuous discharges other than POTWs, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as maximum daily and average monthly discharge limitations. This order includes maximum daily and average monthly effluent limitations for certain constituents, as referenced in 40 CFR § 122.45(d).

The WQBELs for marine aquatic life toxics contained in this Order are based on Table 1 water quality objectives contained in the 2015 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. However, in the existing Order (Order No. R4-2013-0111), the calculated effluent limitations based on 6-month median objectives for marine aquatic life toxics in the Ocean Plan were prescribed as average monthly effluent limitations. Applying the antibacksliding regulations, this Order retains the same approach and sets effluent limitations derived from six-month median water quality objectives for marine aquatic life toxics in the 2015 Ocean Plan as average monthly limitations. The 2013 Order included average monthly final effluent limitations based on the six-month median water quality objectives in the Ocean Plan and the average monthly final effluent limitations are retained in this Order for those pollutants that continue to have reasonable potential to exceed the water quality objectives to prevent backsliding.

4. Determining the Need for WQBELs

Order No. R4-2013-0111 contains effluent limitations for non-conventional and toxic pollutant parameters from Table 1 of the 2015 Ocean Plan. The need for effluent limitations based on water quality objectives from Table 1 of the 2015 Ocean Plan was reevaluated in accordance with the Reasonable Potential Analysis (RPA) procedures contained in Appendix VI of the 2015 Ocean Plan. This statistical RPA method (RPcalc version 2.2) accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific effluent data. The program calculates the upper confidence bound (UCB) of an effluent population percentile after complete mixing. In the evaluation employed in this Order, the UCB is calculated as the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. The calculated $UCB_{95/95}$ is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have an insufficient number of monitoring data or a substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. The Ocean Plan requires that the existing effluent limitations for these constituents be retained in the new Order, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a water quality objective.

Using this statistical procedure, in combination with effluent data provided by the Discharger from January 2013 to March 2018, and minimum initial dilution ratio of 136:1

for Discharge Point 002, Regional Water Board staff have determined that all pollutants with final effluent limitations in the previous permit continue to exhibit reasonable potential, except for DDT. Therefore, the final effluent limitations from the previous permit were carried over for the following pollutants: total residual chlorine and TCDD equivalents. In addition, the following additional pollutants have reasonable potential to exceed Ocean Plan Water Quality Objectives and therefore, require effluent limitations: copper, zinc, and chronic toxicity.

In general, for constituents that have been determined to have no reasonable potential to cause, or contribute to, excursions of water quality objectives, no numerical limits are prescribed; instead a narrative statement to comply with all Ocean Plan requirements is provided and the Discharger is required to monitor for these constituents to gather data for use in RPAs for future Order renewals and/or updates.

Bacteria did not have reasonable potential to cause or exceed water quality standards and no WQBELs for bacteria are prescribed in this Order. Bacteria monitoring is required at offshore and shoreline monitoring locations to demonstrate that the 2015 Ocean Plan objectives are being met. The 2015 Ocean Plan includes receiving water limitations for bacteria within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports as determined by the Regional Water Board. DDW also sets minimum protective bacteriological standards for coastal waters adjacent to public beaches and for public water-contact sports areas in ocean waters. Receiving water monitoring between the outfall and the shoreline demonstrates compliance with the bacteria objectives. Fecal indicator bacteria, total coliform, and *Enterococcus* receiving water and final effluent results were below the single sample receiving water standards between 2013 and 2018. The fecal indicator bacteria and total coliform receiving water data demonstrate compliance with the 30-day geometric mean bacteria standards; however, the geometric mean could not be calculated since a single sample is collected during a calendar month for this facility. San Clemente Island is a remote facility that is not easily accessible and creates challenges in collecting weekly receiving water bacteria samples that have short holding times. In addition, the State Water Board recommended in their approval of the minimum dilution that weekly bacteria monitoring at the shoreline nearest the outfall be conducted, assuming there are contact recreation and shellfish harvesting beneficial uses at the location. The Basin Plan lists the receiving water around San Clemente Island for contact recreation but not shellfish harvesting. As a result, the Regional Water Board reduced the required receiving water bacteria monitoring from weekly to monthly in the previous order. *Enterococcus* single sample receiving water data exceeded the geometric mean standard (35 MPN/ 100 mL) on two separate occasions in 2015 (36 MPN/ 100 mL) and 2017 (37 MPN/ 100 mL); however, *Enterococcus* final effluent monitoring was at or below the detection limit during these two months (2 MPN/100 mL). Since the final effluent monitoring data was in compliance with the geometric mean standards during the same months the receiving water exceeded the geometric mean standards, the cause of the exceedances in the receiving water is unclear and does not trigger reasonable potential for *Enterococcus*. Where bacteria objectives have been routinely exceeded at the shoreline in this region, the Regional Water Board has developed regulatory devices such as Total Maximum Daily Loads to address water quality impairments.

5. WQBEL Calculations

From the Table 1 water quality objectives in the 2015 Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable):

$C_e = C_o + D_m(C_o-C_s)$

where

C_e = the effluent limitation (µg/L)

C_o = the water quality objective to be met at the completion of initial dilution (µg/L)

C_s = background seawater concentration (µg/L) (see Table below)

D_m = minimum probable initial dilution expressed as parts seawater per part wastewater

The D_m is based on observed waste flow characteristics, receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. In this Order, a dilution ratio of 136:1 has been applied to Discharge Point 002.

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submerged outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally. As site-specific water quality data is not available, in accordance with Table 1 implementing procedures, C_s equals zero for all pollutants, except the following:

Table F-10. Pollutants with Background Seawater Concentrations

Constituent	Background Seawater Concentration (C_s)
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

The calculation of WQBELs for copper ~~and ammonia are~~are demonstrated below for Discharge Point 002, as an example~~s~~:

Table F-11. Ocean Plan Water Quality Objectives (C_o) for Copper ~~and Ammonia~~

Constituents	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Average
Copper	3 µg/L	12 µg/L	30 µg/L	--
~~Ammonia~~	~~0.60 mg/L~~	~~2.4 mg/L~~	~~6 mg/L~~	~~--~~

Using the equation, $C_e=C_o+D_m(C_o-C_s)$, effluent limitations are calculated as follows before rounding to two significant digits. All calculations are based on discharge through Discharge Point 002 and, therefore, a dilution ratio (D_m) of 136:1 is applied.

Copper

C_e = 3 + 136(3-2) = 139 µg/L (prescribed as Average Monthly)

C_e = 12 + 136(12-2) = 1,372 µg/L (rounded to 1,370 µg/L prescribed as Daily Maximum)